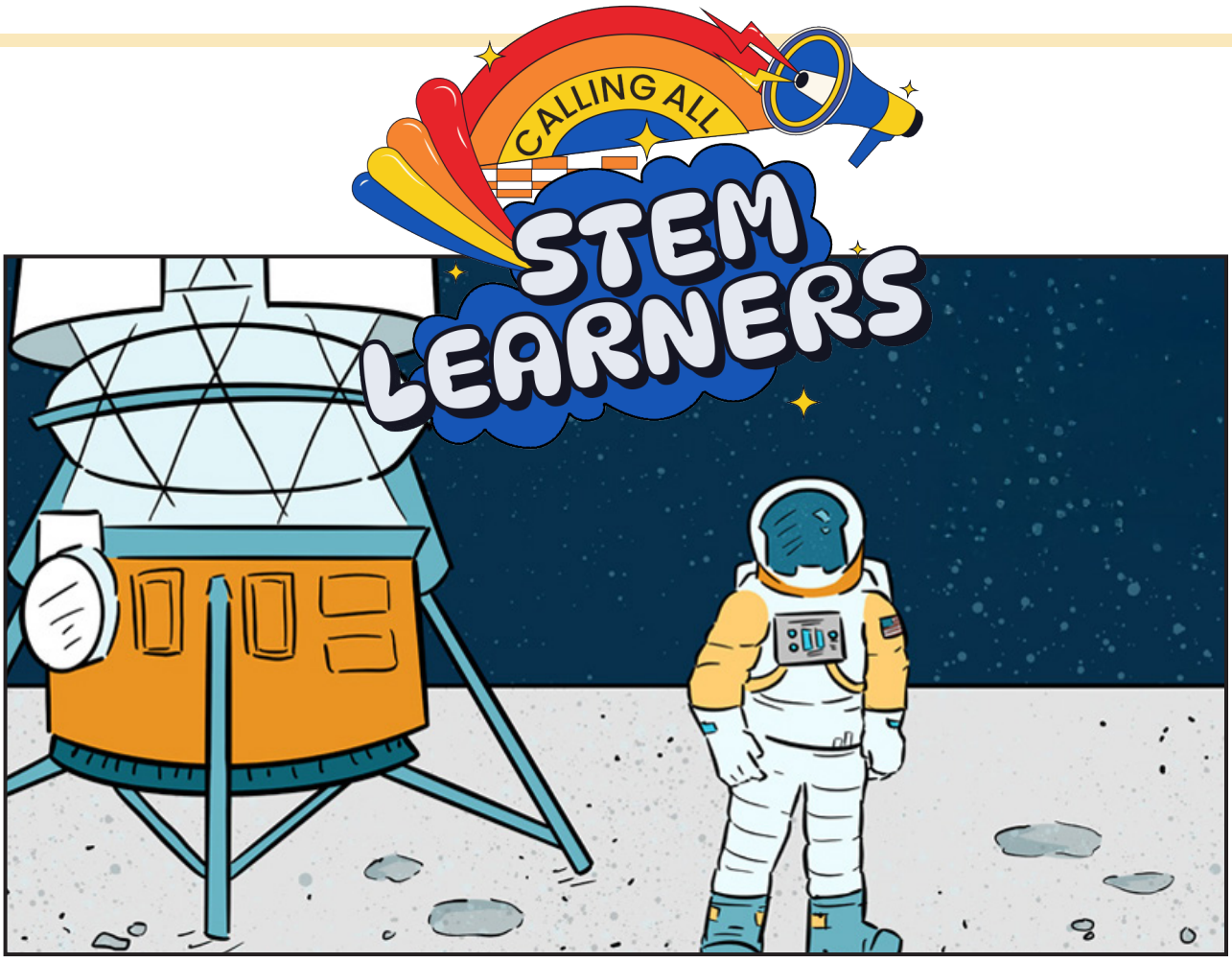


Your PLANETS Science Notebook

for:

Water in Extreme Environments: Water in the Solar System

Name: _____

PLANETS

Ready, S.E.T., Go!

How can we figure out where there is water, and how can we get it?

Find the Water

1. As a group, go to each of the stations.
2. Try to figure out what is in each container without opening it.
3. Record your ideas below.

Container	Is There Water Inside?	Is There Something Else Inside?
1		
2		
3		
4		
5		
6		

Collect the Water

Goal

- Collect water from the container and put it in the cup.

Requirements

- You cannot move the container or touch it directly.
- You can use only the materials provided.

1

Gather materials

cup with water sample

plastic cup

fuzzy sticks

aluminum

straws

index cards

...or plastic wrap, cotton balls, paper clips

2

Transfer water using materials ONLY!

You cannot move the container or touch it directly.

Plan

You can write or draw your ideas to collect water below.

Record

You can write or draw how your design worked below.

Improve

Write or draw ways to improve your technology below.

Science Activity 1: Water Stories: Sharing Experiences

Why is water important?

My Water Story

Think of a story about why water is important.

- It can be a story you heard, watched, read, or experienced.

Then

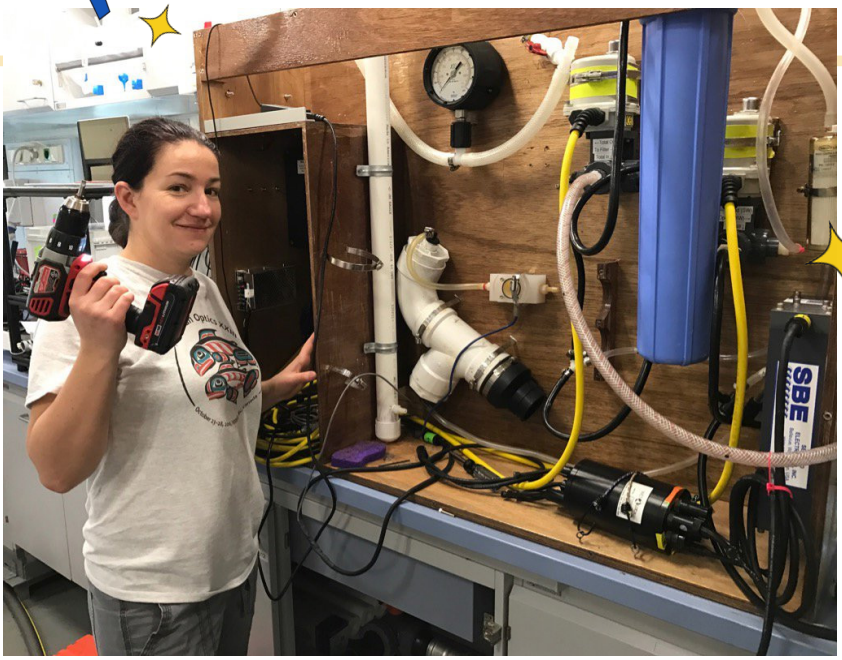
- write or draw your story on this page, or
- build something to demonstrate it

NASA Career Spotlight

Marilé Colón Robles

Check out this bilingual NASA scientist who studies water in Earth's atmosphere at this video link: https://nasaeclips.arc.nasa.gov/videosingular/asksme/project-scientist-marile-colon-robles

NASA Career Spotlights



Dr. Ivona Cetinić, NASA Oceanographer

I am in charge of anything that has to do with biogeochemical processes in the oceans.

Science Activity 6: Destination Water: Choose a Potential Water Reservoir to Explore

Besides Earth, where in the solar system is most likely to have life?

Searching for Life in the Solar System

Think about what you know about the solar system. Choose the planetary body you think is most likely to have life.

Planetary Body: _____

Amount of Water: _____

States: Water Ice Liquid Water Water Vapor

Reservoir: Subsurface Surface Atmosphere Rings

Exploration:
Could humans explore this water to search for life? Why or why not?

Humans have never been to a planetary body beyond the Moon, so it's important to make sure we know where to search for life before we travel to Mars, asteroids, and beyond.

NASA Career Spotlights

Photo Credit: N4 Solutions

Dr. Berhanu Bulcha

My job at NASA is to create advanced technology that collects images and data on planetary bodies, like Saturn's moon Enceladus, so that we can detect what molecules are there and look for potential life in space.

NASA Career Spotlights

Photo Credit: David Tuman

Aaron Yazzie

My job at NASA is to design robotic mechanisms and tools that allow us to gather rock samples from Mars and beyond.

Humans have never been to Mars, so it's important to learn as much as we can about the planet before we go there.

Think about a living thing that might live on the planetary body you chose.

- Have one person imagine and describe it.
- Have person draw, write, or otherwise record the description.

Think about living things on Earth. Which one do you think is most like the living thing you imagined? Could it live on the planetary body you chose?

- Have one member of your group imagine and describe it.
- Have another member draw, write, or otherwise record the description.